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Combatant Commands. The JROC is chaired by the Vice Chairman of the Joint Chiefs of Staff, and members include the Vice Chief of each military service. In December 2017, the JROC provided guidance on the importance of accelerating enterprise cloud adoption. In that guidance, senior military leaders recognized the urgent need for commercial cloud computing and storage for successful military operations.

4. (U) Information is one of the most critical assets in military operations.

Ultimately, the nation that achieves information dominance will have an edge over their adversaries. Cloud computing enables the U.S. military to take advantage of information more quickly than our adversaries and it will ensure a resilient cloud architecture to continue informed operations during communication disruptions. Enterprise cloud computing is a necessary element for the U.S. military to defend our nation and retain global influence.

5. (U) The continued absence of DOD-wide, enterprise cloud computing capability seriously impedes the military's ability to collaborate and share information with our military services, partner nations, and the intelligence community. Information relevant to national defense comes in many different forms (*e.g.*, cell phone records, satellite telemetry, full motion video, statistics, etc.) and is scattered across the world in air, land, sea, space, and cyber domains. To operate at the speed of relevance, cloud technology is necessary to collect, analyze, and share information so that it can be used to protect our nation. The fusion of intelligence and operational information from all sources and domains is critical for the U.S. military's effectiveness and success in combat. DoD cannot achieve continued information dominance without a resilient cloud computing environment.

6. (U) The U.S. military operates globally and must have a means to effectively perform if our communications are threatened or disrupted (*e.g.*, a massive power grid failure, an

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adversary cuts an undersea cable, atmospheric conditions that interfere with satellites, etc.). An enterprise cloud capability, with tactical edge technology, can retain its last known data update and continue operating locally in degraded, denied, disrupted, intermittent, or low bandwidth environments. To date, such capability only exists in small pockets for specific missions and not for the entire force. Providing persistent global access to data affords the warfighter a critical capability that does not currently exist across most of DoD.

7. (U) A DoD-wide, enterprise cloud computing capability, including distributed capability at the tactical edge, will deliver information dominance to our warfighters because it will overcome the traditional military communication challenges like bandwidth, data classification, storage, and correlation/exploitation restraints at the scale required by DoD. To meet an accelerated timeline, we require this cloud platform today. Like any new capability, implementation will require the development of processes and plans to incorporate large-scale cloud computing quickly across the joint force. This technology may offer undiscovered opportunities that will only be revealed through demonstrations, experiments, and war simulations which need to begin as soon as possible. The implementation of this new capability requires the development of strategies to exploit this accelerated manner of warfare. These strategies necessitate new Tactics, Techniques, and Procedures (TTPs), which in turn will require numerous training cycles in order to ensure that our warfighters will employ them as an “involuntary reflex.” We can start developing these elements in days, not years, after delivery, but delivery is required before we can begin strategy and TTP development.

8. (U) The United States cannot expect military success fighting tomorrow's conflicts with yesterday's technology. Providing DoD with rapid access to an enterprise cloud, one which provides elastic computing power and storage, is vital to U.S. national security. The



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men and women of the U.S. military must have access to the right technology at the right time to fight and win wars. Delaying implementation of a cloud solution will negatively affect DoD's efforts to be victorious in contested environments and retain global influence over our near-peer competitors.

9. (U) The current geopolitical landscape is fast-paced, competitive, and dynamic. As articulated in the National Defense Strategy, our near-peer competitors are modernizing rapidly. China continues to invest heavily in cloud technology because it directly supports its national security strategy, as well as China's information-based warfighting doctrine. China knows that information dominance is necessary to achieve air, land, sea, space, and cyber dominance. Artificial Intelligence (AI) and Machine Learning (ML) will enable that information dominance, and cloud technology is at the heart of it. That is why China has several companies rapidly building the necessary foundational cloud service platforms, which are reducing its foreign dependencies on cloud technology and equipment. They are not only in the pursuit of being a world leader in AI but are focused on being the preeminent power in the Indo-Pacific region.

10. (U) Similarly, Russia has prioritized technological advancement in cloud technology to feed AI. Russia's AI strategy specifically focuses on the military application of these capabilities. Russia views weaponized information as key to its military strategy – in peacetime and war. Russian Chief of the General Staff Gerasimov announced that "information operations troops" were involved in the Kavkaz-2016 strategic command staff exercise in September 2016, demonstrating Russian military commitment to controlling the information domain. In addition, Russian President Vladimir Putin stated: "Artificial intelligence is the future, not only for Russia, but for all humankind. It comes with colossal opportunities, but also

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threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world.” To counter these threats, we need a globally accessible, all-classification platform to further develop strategies focused on employing advanced cloud-based computing solutions required for success in this realm.

11. (U) All participants in this Great Power Competition recognize the overwhelming potential of this technology, and our adversaries are developing new ways to capitalize on these capabilities every day. To dominate this competition, DoD needs cloud capability to explore and exploit the opportunities that are presented by this technology. More importantly, effective implementation will require the development of strategies and TTPs which must be solidified through countless exercises across the Services, Combatant Commands, and in concert with our worldwide partners. The race in this realm is raging, and in the battle for information dominance, victory does not favor the hesitant.

12. (U) This position has been coordinated with and is supported by all United States Combatant Commands. DoD has expended significant effort, resources, and time in only attempting to procure this enterprise cloud capability while U.S. adversaries have greatly advanced their positions in this environment. DoD is now positioned to develop its capabilities. Any further delays negatively impact our national security, both now and in the future. Our adversaries are employing these technologies and our warfighters need this capability now.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on this 29<sup>th</sup> day of January, 2020.

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